Quality Control

Work Order ID 10 Tuesday, June 04, 2013 2:4		*1	02635*				Page
Item ID: D3209-3 Revision ID: Item Name: Bushing	Start Oty: 1040	Accept	*N900	004010) * s	Setup Start Stop	1/2/1
Start Date: 6/4/2013 Required Date: 6/11/2013 Reference:	Start Qty: 10,00 Req'd Qty: 10.00	*10* *10*	Cust Item ! Customer:				14(7)
Approvals: Process P QC:		: 13 -64 Tooling: : SPC (Y/N):		ate:	F	Run Start Stop	"NR1"
Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Ho	Tool ID	Tool # Plan Code	Accept Qty	Reject Qty	Reject Insp. Number Stamp
Draw Nbr Re	evision Nbr						
D3209 Re	ev A		·				
*100 *100 Hardinge Hardinge CNC Lathe Small	Hardinge CNC LATHE SMALL Memo Turn D3209-3 bushii	0.00 0.00 og as per Folio FA354 and Dwg D32	S = 13	1∞/ H	30	P	
110 *110* QC Quality Control	QC2- Inspect parts off machine F. Memo		S F.K. 13/06	· / //	30	B	
120 *120* QC	QC8- Inspect parts - second check	0.00	m/ 13/06/1	y	30	.))	

DQA:	A: Date:						™ ∆∧PT						
						WORK ORDER NON	-CO	NFO	RMANCE / UPDATE				AEROSPACE
QA Closed:			Date:							W	ork Order up	odate only	
Work Orde	er:					DISPOSITION			AGAIN	ST DE	PARTMENT	/PROCESS	
***************************************	··· —					Rework	1		Skid-tube Crosstul	he	1	Water Jet	Engineering
Part N	No.					Scrap	1 1		Machining Small F	—	Pro	d. Eng. Coor.	Quality
						Use-as-is	1 1		noforming Finishi	<u> </u>	-∤	re/Packaging	Other
NCR I	No.					Suspected Unapproved	1		Large Fab Composi			Supplier	1
											-		
Root		i	:		Desc	ription of work order update	1	nitial	Action		Sign &		
Cause		Date	Step	Qty		or non-conformance	Chi	ef Éng	Description		Date	Verification	QC Inspector
Design	Ш							¥ **	·				
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	В∈	ending				Bend		Folio/P	Program		Outside Dim	ensions	Pressure/Forced
	C∈	entre No	t Concer	ntric		BOM/Route		Grain			Over/Under	tolerance	Set-up
	Cr	acks				Broken/Damage/Defect		Hardwa	are		Part Incorred	ct [Temperature/Cure
	Cr	imp/Kin	k/Ripple	/Wave		Burrs	[]	nspect	ion Incomplete/Unqualified		Part Lost/Mi	ssing	Weld
		ıffs				Contamination		nstruct	tions Incomplete/Unclear		Part Moved		Wrong Stock Pulled
	Cr	ushing				Countersink		Misalig	gned/off center		Positioned V	Vrong	
	ПНе	eat Trea	t			Cut Too Short		Mislabe	eled		Power Loss/	Surge	Other
	lin:	spection	Strip in	Tube		Drawing		Misread	d	-	-		
İ	М	arks/Ch	atter			Drill Holes		Off-set					
	Tu	rning Se	equence			Finish		Out of (Calibration				
	Wave/Twist in Tube			Fit/Function	\Box	Out of S	Sequence						

0.00

0.00

QC21- Final Inspection - Work Order Release

Memo

140

QC

140

Quality Control

119 (A)

Insp.

Stamp

NF 14

Page 2

DQA:		- Date:			WORK ORDER NON-CONFORMANCE / UPDATE									DART
QA Closed:		Date:			WORK ORDER NON	-00	ONFOI	NIVIAIVE / C	PUATE	W	ork Order up	odate only		AEROSPACE
Work Orde	er:				DISPOSITION				AGAINST	DE	PARTMENT	/PROCESS	•	
Part N	lo				Rework Scrap Use-as-is		Thern	Skid-tube Machining noforming	Crosstube Small Fab Finishing		=	Water Jet d. Eng. Coor. re/Packaging		Engineering Quality Other
NCR N	10.				Suspected Unapproved	J		Large Fab	Composite	L]	Supplier	Ļ	
Root Cause	Date	Step	Qty	Desc	ription of work order update or non-conformance		Initial nief Eng		ction cription		Sign & Date	Verificatio	n	QC Inspector
Design Doc/Data Equip/Tooling Handling/Pre Material Operator Offset/Setup Process Supplier Training Transport Unapproved			4.07									Verification		QC IIISPECTOT
	- Coor					FAI	ULT CAT	EGORY						
Landin	Cracks Crimp/Ki Cuffs Crushing Heat Tree Inspectio	at in Strip in	/Wave		General Bend BOM/Route Broken/Damage/Defect Burrs Contamination Countersink Cut Too Short Drawing Drill Holes Finish		Grain Hardwa Inspecti Instructi Misalig Mislabe Misread Off-set	on Incomplete/U ions Incomplete/ ned/off center led	'Unclear		Outside Dim Over/Under Part Incorred Part Lost/Mi Part Moved Positioned V Power Loss/	tolerance ct ssing Vrong		Pressure/Forced Set-up Temperature/Cure Weld Wrong Stock Pulled Other
	Wave/Tv	vist in Tub	e		Fit/Function		Out of S	equence						

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Picklist Print

Tuesday, June 04, 2013 2:45:31 PM

Work Order ID:

102635

Parent Item:

D3209-3

Parent Item Name:

Bushing

Start Date: 6/4/2013

Required Date: 6/11/2013

Page 1

Start Qty: 10.00

Required Qty: 10.00

Comments:

IPP A04.04.14New issueKJ/RF

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M303R0.500 303 Round Bar 0.500"		Purchased	No			100	f	60.7733	0.0333	0.3505263			
				Location MAT028		<u>Loc Oty</u>	Lo	c Code					

AT028 60.77330000 124081 | 1E-09 124711 28.2 → 125387 32.5733

-36 F.K 13/06/14

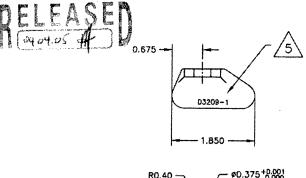
DQA:		Date:											*	N APT
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QA Closed.		Dute.		-			<u> </u>						ш	
Work Orde	er:				DISPOSITION				AGAINST	DEPA	ARTMENT	/PROCESS		
					Rework		,	Skid-tube	Crosstube			Water Jet		Engineering
Part N	lo.				Scrap	1		Machining	Small Fab		Pro	d. Eng. Coor.		Quality
			-		Use-as-is]	Therr	noforming	Finishing		Rec/Sto	re/Packaging		Other
NCR N	lo				Suspected Unapproved]		Large Fab	Composite			Supplier	\Box	
Root				Desc	ription of work order update		<u>l</u> Initial	Act	tion	1	Sign &			
Cause	Date	Step	Qty		or non-conformance	1	nief Eng	ļ.	ription		Date	Verificatio	n	QC Inspector
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Material													ļ	
Operator													1	
Offset/Setup														
Process		Ì												
Supplier											•			
Training													l	
Transport					,									•
Unapproved				<u></u>						<u></u>				
						FA	ULT CA	regory						
Landin	ng Gear				General		-		-					•
1	Bendin	g			Bend	L	Folio/F	Program		0	utside Dim	ensions		Pressure/Forced
	Centre	Not Conce	ntric		BOM/Route	L	Grain			ال	ver/Under	tolerance		Set-up
	Cracks				Broken/Damage/Defect	_	Hardwa	ire	ļ	∐ Pā	art Incorre	ct	Ш	Temperature/Cure
ļ.	Crimp/	Kink/Ripple	e/Wave	_	Burrs	_	Inspect	ion Incomplete/Ur	nqualified	Pá	art Lost/Mi	issing	⊷	Weld
	Cuffs				Contamination			ions Incomplete/l	Jnclear	_	art Moved			Wrong Stock Pulled
[Crushir	_			Countersink		4	ned/off center		-	ositioned V	_		
ļ	Heat Ti				Cut Too Short	<u></u>	Mislabe	eled		P0	ower Loss/	Surge	Ш	Other
ļ	→ `	ion Strip in	Tube		Drawing	L	Misread	t						
ļ		Chatter			Drill Holes		Off-set			_				
		g Sequence		L	Finish	L	Out of 0	Calibration		_				
	Wave/	Twist in Tul	be		Fit/Function	1	Out of S	Sequence						

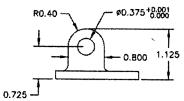
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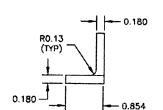




DESIG	N DRAWN BY		T AEROSPACE LTD AWKESBURY, ONTARIO, CANADA
CHEC	APPROVED CONTRACTOR	DRAWING NO. D3209	REV. A SHEET 1 OF 1
DATE		TITLE	SCALE
04.0)1.27	BRACKET	1:2
Α	04.01.27	NEW ISSUE	

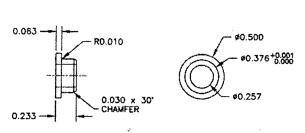


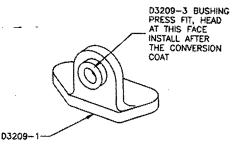






D3209-1 BRACKET

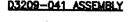






D3209-3 BUSHING SCALE 1:2





- D3209-1 BRACKET: D3209-3 BUSHING
 1) BREAK ALL SHARP EDGES 0.005 TO 0.015
 2) MATERIAL: 6061-T6 (QQ-A-200/8 OR QQ-A-250/11 OR QQ-A-225/8) ALUMINUM BAR (M6061T6B)

- 3) MATERIAL: AISI 303 SS (M303R)
 4) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
 POWDER COAT GREY SANDTEX (REF. 4.3.5.6) PER DART QSI 005 4.3
 5) ENGRAVE DART P/N AS SHOWN
 6) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
 7) ALL DIMENSIONS ARE INCHES

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DQA:		Date:											
QA Closed:		Date:			WORK ORDER NON-	-C(ONFO	RMANCE / UPDAT		ork Order up	adata only - [\neg	AEROSPACE
Qri closed.	<u>. </u>	Dute.					<u> </u>	· ·					
Work Orde	er:				DISPOSITION			AG	SAINST DE	PARTMENT	/PROCESS		
					Rework			Skid-tube Cro	sstube]	Water Jet		Engineering
Part I	Vo				Scrap			Machining Sm	all Fab	Pro	d. Eng. Coor.		Quality
					Use-as-is		Therr	noforming Fir	nishing	Rec/Stor	re/Packaging		Other
NCR I	No				Suspected Unapproved			Large Fab Com	posite]	Supplier	\square	
Root				Desc	ription of work order update		Initial	Action		Sign &			
Cause	Date	Step	Qty		or non-conformance	l	nief Eng	Description		Date	Verification	,	QC Inspector
Design												\top	
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Material										·		ı	
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	Bendin	g			Bend		Folio/P	rogram		Outside Dim	ensions	F	ressure/Forced
	Centre	Not Conce	ntric		BOM/Route		Grain			Over/Under	tolerance	S	et-up
	Cracks				Broken/Damage/Defect		Hardwa	re		Part Incorred	ct [7	emperature/Cure
	Crimp/	Kink/Ripple	/Wave		Burrs		Inspecti	on Incomplete/Unqualifie	ed	Part Lost/Mi	ssing	\neg $_{v}$	Veld
	Cuffs				Contamination		Instruct	ions Incomplete/Unclear		Part Moved	[\neg $_{v}$	Vrong Stock Pulled
	Crushin	g			Countersink		Misalig	ned/off center		Positioned W	/rong		
	Heat Treat		_	Cut Too Short		Mislabe	led		Power Loss/S	Surge		Other	
	Inspect	ion Strip in	Tube		Drawing		Misread	I		· 		-	
	Marks/	Chatter			Drill Holes		Off-set						
	Turning	Sequence			Finish		Out of 0	Calibration					
	Wave/Twist in Tube				Fit/Function		Out of Sequence						

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DART AEROSPACE LTD	Work Order:	102635
Description: Bushing	Part Number:	D3209-3
Inspection Dwg: D3209 Rev: A		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

X First Article Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.063	+/-0.010	. Obolo	7		FK-04	Yer.
0.233	+/-0.010	,237	7		11	(1
0.030 x 30°	+/-0.010	,630 x 30°			1,	•
Ø0.500	+0.010/-0.010	,Swo	7		٨.	6
Ø0.376	+0.001/-0.000	2766 J	7		F15-69	Mic.
Ø0.257	+0.006/-0.001	. 257	7		FK-04	Mic. Kern.

	<u>~S</u>				
Measured by:	Q.A.	Audited by:	and a	Prototype Approval:	N/A
Date:	13/06/14	Date:	13/06/14	Date:	N/A

Rev	Date	Change	Revised by	Approved
Α	04.12.07	New Issue	KJ/JLM	
В	07.01.16	Tolerance for Ø0.500 revised	JLM/EC	

DQA:			Date:				***	™ ∩∆RT						
QA Closed:			Date:			WORK ORDER NON-	-C(ONFO	RMANCE / UPDAT		ork Order up	odate only	\neg	AEROSPACE
						DISPOSITION			Λ.		PARTMENT	· · · · · · · · · · · · · · · · · · ·		
Work Orde	er: _					DISPOSITION			AC		PARTIVILIVI)	/PROCE33		
						Rework			Skid-tube Cro	sstube		Water Jet		Engineering
Part I	No					Scrap			Machining Sm	nall Fab	Pro	d. Eng. Coor.		Quality
						Use-as-is		Therr	· —	nishing	Rec/Stor	re/Packaging	_	Other
NCR I	No.					Suspected Unapproved			Large Fab Com	nposite	j	Supplier		
Root					Desc	ription of work order update		Initial	Action		Sign &			
Cause		Date	Step	Qty		or non-conformance	Ch	ief Eng	Description	١.	Date	Verification		QC Inspector
Design														
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Handling/Pre				1.										•
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	Ш	Cracks				Broken/Damage/Defect		Hardwa	re		Part Incorrec	ct [T	emperature/Cure
		Crimp/Kir	k/Ripple	/Wave		Burrs		Inspect	on Incomplete/Unqualifi	ed	Part Lost/Mi	ssing	٧	/eld
	Ш	Cuffs				Contamination		Instruct	ions Incomplete/Unclear		Part Moved		v	Vrong Stock Pulled
	د	Crushing				Countersink	-	Misalig	ned/off center		Positioned W	√rong		
		Heat Trea	t			Cut Too Short		Mislabe	led		Power Loss/S	Surge	O	ther
		Inspection	n Strip in	Tube		Drawing		Misread	i					
		Marks/Ch	atter	*		Drill Holes		Off-set						
		Turning S	equence			Finish		Out of 0	Calibration					
	Wave/Twist in Tube				Fit/Function		Out of Sequence					· ·		